

Amendment under 37 C.F.R. §1.111  
Serial No. 09/960,398  
Atty. Docket No. 011254

**Listing of Claims:**

This listing of claims replaces all prior versions and listings of claims in the application.

1. (Previously Presented) A capacitor comprising:

a buffer structure formed on a substrate;

a lower electrode formed on the buffer structure;

a capacitor dielectric film formed on the lower electrode, and formed of a perovskite ferroelectric material having a smaller thermal expansion coefficient than that of the buffer structure and having a crystal oriented substantially perpendicular to a surface of the lower electrode; and

an upper electrode formed on the capacitor dielectric film,

the buffer structure having a height larger than a width thereof so as to suppress a stress applied to the capacitor dielectric film caused by a thermal expansion coefficient difference between the substrate and the capacitor dielectric film.

2. (Original) A capacitor according to claim 1, wherein a thermal expansion coefficient of the capacitor dielectric film is larger than that of the substrate.

3. (Previously Presented) A capacitor comprising:  
a lower electrode formed on a substrate  
a capacitor dielectric film formed on the lower electrode, and formed of a perovskite ferroelectric material having a larger thermal expansion coefficient than that of the substrate and having a crystal oriented substantially perpendicular to a surface of the lower electrode; and  
an upper electrode formed on the capacitor dielectric film,  
the lower electrode having a height larger than a width thereof so as to suppress a stress applied to the capacitor dielectric film caused by a thermal expansion coefficient difference between the substrate and the capacitor dielectric film.

4. (Original) A capacitor according to claim 3, wherein a thermal expansion coefficient of the lower electrode is larger than that of the capacitor dielectric film.

5. (Original) A capacitor according to claim 1, wherein the capacitor dielectric film has (001) oriented tetragonal crystal structure.

6. (Original) A capacitor according to claim 5, wherein the lower electrode has (100) oriented cubic crystal structure.

7. (Original) A capacitor according to claim 3, wherein the capacitor dielectric film has (001) oriented tetragonal crystal structure.

Amendment under 37 C.F.R. §1.111  
Serial No. 09/960,398  
Atty. Docket No. 011254

8. (Original) A capacitor according to claim 7, wherein the lower electrode has (100) oriented cubic crystal structure.

9. (Original) A capacitor according to claim 1, wherein the capacitor dielectric film has (111) oriented rhombohedral crystal structure.

10. (Original) A capacitor according to claim 9, wherein the lower electrode has (111) oriented cubic crystal structure.

11. (Original) A capacitor according to claim 3, wherein the capacitor dielectric film has (111) oriented rhombohedral crystal structure.

12. (Original) A capacitor according to claim 11, wherein the lower electrode has (111) oriented cubic crystal structure.

13. (Currently Amended) A semiconductor device comprising:

a memory cell transistor formed on a semiconductor substrate, and including a gate electrode, and source/drain diffused layers formed in the semiconductor substrate respectively on both sides of the gate electrode;

an insulation film covering the semiconductor substrate with the memory cell transistor formed on;

Amendment under 37 C.F.R. §1.111  
Serial No. 09/960,398  
Atty. Docket No. 011254

a buffer structure formed on the insulation film, ~~the buffer structure having a height larger than a width thereof~~; and

a capacitor formed on the buffer structure, and including a lower electrode electrically connected to one of the source/drain diffused layers; a capacitor dielectric film formed on the lower electrode, and formed of a perovskite ferroelectric material having a smaller thermal expansion coefficient than that of the buffer structure and having a crystal oriented substantially perpendicular to a surface of the lower electrode; and an upper electrode formed on the capacitor dielectric film,

the buffer structure having a height larger than a width thereof so as to suppress a stress applied to the capacitor dielectric film caused by a thermal expansion coefficient difference between the substrate and the capacitor dielectric film.

14. (Previously Presented) A semiconductor device comprising:

a memory cell transistor formed on a semiconductor substrate and including a gate electrode, and source/drain diffused layers formed in the semiconductor substrate respectively on both sides of the gate electrode;

an insulation film covering the semiconductor substrate with the memory cell transistor formed on; and

a capacitor formed on the insulation film, and including a lower electrode electrically connected to one of the source/drain diffused layers; a capacitor dielectric film formed on the lower electrode, and formed of a perovskite ferroelectric material having a larger thermal

expansion coefficient than that of the semiconductor substrate and having a crystal oriented substantially perpendicular to a surface of the lower electrode; and an upper electrode formed on the capacitor dielectric film,

the lower electrode having a height larger than a width thereof so as to suppress a stress applied to the capacitor dielectric film caused by a thermal expansion coefficient difference between the substrate and the capacitor dielectric film.

15-28. (Withdrawn)

29. (New) A capacitor according to claim 1, wherein the buffer structure is formed of an insulating material.

30. (New) A capacitor according to claim 1, wherein the capacitor dielectric film is formed by CVD method.

31. (New) A capacitor according to claim 2, wherein the capacitor dielectric film is formed by CVD method.

32. (New) A semiconductor device according to claim 13, wherein the buffer structure is formed of an insulating material.